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ABSTRACT

This thesis charts the development of a reference guide to searchable fields in the ERIC online database including identifying a target audience, planning and preparation of drafts, testing drafts with experienced online searchers and students, incorporating suggestions, and preparing and distributing the final version of the guide. The thesis reports that draft test results indicated the guide was successful in introducing and clarifying ERIC's searchable fields for searchers with moderate online experience; novice searchers needed more information about searching strategies than the guide provided. The thesis describes the ERIC database and introduces online searcher problems which prompted production of the guide. A literature review includes findings about the intended reading audience of searchers, background information about and user perceptions of the three major online vendors of the ERIC database, and research/advice about developing a concise and clear reference guide. A chapter on methodology describes development of questionnaires to solicit evaluation of the draft from groups of moderately experienced and novice searchers and from other reviewers, patterns which emerged from the responses, and incorporation of responses into the revised guide. Appendices contain copies of draft and final versions of the reference guide, search exercise/questionnaires for reviewers, and reviewers' suggested revisions. (LFL)

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MAKING A MOLEHILL OUT OF A MOUNTAIN:
THE REFERENCE GUIDE TO THE SEARCHABLE FIELDS IN ERIC

BY

ANNE ELISE GARNETT, B.A.

A Thesis submitted to the Graduate School
in partial fulfillment of the requirements
for the Degree
Master of Arts

Major Subject: English
(Emphasis in Technical and Professional Communication)

Second Field: Computer Science

New Mexico State University
Las Cruces, New Mexico
May 1987

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In 1984, the User Services Specialist at the ERIC Clearinghouse on Rural Education and Small Schools (ERIC/CRESS) on the New Mexico State University campus in Las Cruces visited regional librarians and information specialists who search the ERIC Database. The User Services Specialist realized that these searchers were unaware of several of ERIC's searchable fields at their disposal. As a result of her discovery, the staff at ERIC/CRESS proposed to publish a reference guide to the searchable fields in the ERIC Database.

This thesis tells of the development of the reference guide, focusing on the tasks of appropriately identifying the target audience (those persons who would most benefit from the guide) and defining their needs, planning and preparing drafts of the guide, testing drafts with searchers and potential searchers (students), incorporating suggestions from the test subjects, and preparing and distributing final versions of the guide.

Results from the field tests indicate that for searchers with at least moderate experience, the guide does introduce and clarify ERIC's searchable fields and provide reference aids for their use. Novice searchers, however, generally need more information about searching strategies than the guide provides.

TABLE OF CONTENTS

Page

List of Tables.....ix

List of Figures..... x

Chapter

1. INTRODUCTION..... 1

The ERIC Database and Its Users..... 1

The Problem..... 4

2. LITERATURE REVIEW..... 9

Database Searchers.....10

The Reference Document and Its Makings..24

3. METHODOLOGY.....34

4. CONCLUSION.....56

REFERENCES CITED.....59

APPENDICES

A. Reference Guide to the Searchable Fields in ERIC: Final Version.....63

B. Reference Guide to the Searchable Fields in ERIC: Draft.....64

C. Search Exercise and Questionnaire for Student Reviewers.....67

D. Questionnaire for Reviewers with Moderate Searching Experience.....74

E. Telephone Survey.....79

F. Reviewers' Suggested Revisions.....82

LIST OF TABLES

Table

Page

1. Solicited Reviewers by ERIC Experience....50

2. Testing Strategy by Reviewer Group.....51

3. Response Rate by Reviewer Group.....52

LIST OF FIGURES

Figure Page

1. ERIC Citation.....6

CHAPTER 1. INTRODUCTION

The reference guide to searchable fields in the ERIC Database is not a hefty document; it's a brochure. However, the guide owes its existence to the efforts of countless persons. The guide appears as Appendix A to this thesis, which tells the story of the guide's development. This chapter presents general information about the ERIC Database, tells something of those who use it, and introduces the problem that indicated the need for a reference guide.

The ERIC Database and Its Users

The ERIC Database is a computerized collection of document citations concerned with education. The documents cited range from research reports to computer programs to classroom worksheets to bibliographies to journal articles. A short history of the ERIC Database follows.

In 1966, the U.S. Office of Education formed ERIC, the Educational Resources Information Center, to offer the public access to government-sponsored research reports in the field of education. ERIC began its work

by locating and gathering the reports, preparing report citations and publishing them in a monthly abstract journal, and distributing the reports to the public at a low cost. ERIC published its first issue of the abstract journal in November of 1966.

Today the abstract journal, Resources in Education (RIE), is available both in printed form and as one of two files that make up the ERIC Database. RIE announces a variety of documents that deal with education, citing about 1200 per month. Since 1966, it has cited over 250,000 documents ("ERIC Fact Sheet," 1986).

The other file of the ERIC Database, also available in print, is the Current Index to Journals in Education (CIJE). This index cites articles about education from approximately 760 journals, announcing close to 1500 articles each month. Since its first issue in 1969, it has referenced over 300,000 journal articles ("ERIC Fact Sheet," 1986).

The ERIC Database, then, consists of all the citations to date in RIE and CIJE, which cover over half a million documents. Document citations include bibliographic information, and abstracts (for documents cited in RIE) or annotations (for journal articles referenced in CIJE). Persons can "search" the ERIC Database, either by computer or manually with the printed

indexes, to locate document citations of interest.

At over 700 libraries and educational institutions in the United States, the ERIC Document Reproduction Service (EDRS) maintains microfiche collections of all documents cited in RIE ("ERIC Fact Sheet," 1986). The ERIC microfiche collection is also available by subscription, and for a fee, EDRS provides microfiche or paper copies of individual RIE documents. Journal articles cited in CIJE are available at libraries that carry the journals in question. University Microfilms International provides reprints of journal articles for a fee.

Online vendors offer the services of the ERIC Database to the public. Some 30 online vendors in the United States and abroad subscribe to the collection of magnetic tapes that house the ERIC Database ("ERIC Fact Sheet," 1986). The vendors in turn sell clients computer access rights to the ERIC Database. About 700 institutions subscribe to the ERIC Database and offer searches to the public, including 16 ERIC clearinghouses, and numerous libraries and educational service centers ("ERIC Fact Sheet," 1986). The vendors also offer ERIC Database services by subscription for customers with personal computers.

ERIC is the database of choice for persons seeking documents about education (ERIC Staff Handbook, 1982; Fenichel & Harter, 1981; Goudy, 1982; McClure, 1981; Tallon, 1982). Teachers, students, parents, members of professional educational organizations, educational administrators, researchers, and resource specialists, and professional database searchers, such as librarians, regularly make use of the ERIC Database. An estimated 3,269 United States institutions offer the public access to ERIC products. Annual usages of ERIC resources approach 2.7 million, and users of the ERIC Database retrieve around 30 million bibliographic citations annually ("ERIC Fact Sheet," 1986).

The Problem

There is no question that the ERIC Database gets heavy use. A question does arise of whether those who use the ERIC Database take full advantage of--or are fully aware of--its resources. The citations in RIE and CIJE include, along with abstracts and annotations, a host of bibliographic information, such as the document's title, author, date and place of publication, and intended reading audience; descriptive words and notes about the document; and other information such as

how to order microfiche or paper copies of the document. A sample citation appears as Figure 1. Each category of information shown in Figure 1 constitutes a searchable field; that is, a document citation can be retrieved from the ERIC Database by specifying the author, the title, words contained in the abstract or descriptive note, the language in which the document is written, or any other category of information or combination of categories (as is usually the case).

The User Services Specialist at the ERIC Clearinghouse on Rural Education and Small Schools (ERIC/CRESS) on the campus of New Mexico State University in Las Cruces frequently searches the ERIC Database. In 1984, she visited regional ERIC standing-order customers, institutions that subscribe to ERIC services on a monthly basis. On her visit, she realized that searchers at these institutions, most of whom had not received formal training in database searching, were not making full use of the searchable fields in the ERIC Database. The searchers were unaware of the existence of some of the fields and seemed confused about the use of others.

AN - ED232851
CHAN- SE042623
TI - Science Meta-Analysis Project: User's Guide for the Machine-Readable Raw Data File
AU - Kahl, Stuart R.; Anderson, Ronald D.
OS - Colorado Univ., Boulder. Lab. for Research in Science and Mathematics Education.
SPO - National Science Foundation, Washington, D.C.
SO - Jun 1982; 143pp
NO - For related documents, see ED 223 475-476.
LO - U.S.; Colorado
IS - RIE83DEC
AV - EDRS Price - MF01/PC06 Plus Postage.(2 MF).
NU - Report: NSF/SED-82028; Grant: SED-80-12310
DT - 050; 131
LA - English
IT - Academic Achievement; *Computer Storage Devices; *Databases; Elementary School Science; Elementary Secondary Education; *Information Retrieval; Magnetic Tapes; *Meta Analysis; *Science Curriculum; Science Education; *Science Instruction; Science Programs; Secondary School Science; Student Characteristics; Teacher Characteristics; Teacher Education; Teaching Methods
ST - National Science Foundation; *Science Education Research
AB - The Science Meta-Analysis Project (SMAP) resulted in the meta-analysis of a sizable proportion of the research in pre-college science education. Seven broad questions were examined during the study. These include the effects of different curriculum programs, effects of different instructional systems

Figure 1. ERIC Citation.

(Courtesy System Development Corporation)

She noticed in particular that the searchers were not familiar with the "target audience" field, a relatively new field added to the ERIC Database in 1984. Another problem field she identified was the "geographic source of document," which states where a document is published, but was understood by many of the searchers to be the place about which a document is written.

As a result of the User Services Specialist's discovery, the staff at ERIC/CRESS proposed a reference guide that would list and define the major searchable fields of the ERIC Database. Funding for the guide originated from the U.S. Department of Education's Office of Educational Research and Improvement. ERIC clearinghouses receive funds through a competitive bid process, which involves the submission of technical work plans with attendant budgets. ERIC/CRESS proposed the guide as a special project and appended the proposal to its fiscal year 1986 technical work plan. The Office of Educational Research and Improvement approved the project, and during the summer of 1985, the User Services Specialist, an illustrator, and I began our work on the reference guide. ERIC/CRESS distributed the guide in May of 1986.

The following literature review reveals the theoretical foundation of the reference guide. This foundation includes research findings about the intended reading audience of searchers and research and advice about reference guide development. The chapter on methodology tells how the User Services Specialist and I built upon the theoretical foundation to produce the reference guide. The final chapter traces the distribution of the guide and concludes by evaluating the effectiveness with which the guide presents ERIC's searchable fields to the ERIC searcher.

CHAPTER 2. LITERATURE REVIEW

Two concerns permeated the development of the reference guide. The first concern was to take a close look at the problem that the User Services Specialist identified--searchers not taking full advantage of the resources of the ERIC Database--and decide how to confront it. The second concern was to get the news about the capabilities of the database to those who need it--the ERIC searchers. This concern demanded that we (1) present the guide in a format that would encourage the searchers to pick it up and read it, (2) convey the information in a manner appropriate to the searchers' experience with the database, and (3) distribute the guide to those who would most benefit from it.

This review first addresses the problem setting, citing findings about searchers and their relationships with the producers and the major online vendors of the ERIC Database. The review then turns to the solution--the development of a reference guide--and cites works that address the processes of planning a reference document, preparing drafts, testing drafts with readers and incorporating indicated revisions, and preparing and distributing a final version of the document.

Database Searchers

The User Services Specialist at ERIC/CRESS regularly visits ERIC standing-order customers in her region. She knows from conversations with searchers at these institutions that most of the searchers do not have formal training in online searching. According to McClure (1981), the lack of formal training among searchers is widespread in the academic and public library systems: "few academic librarians and less public librarians have received training regarding online searching." McClure attributes the limited online searching activity that he observed among depository librarians to their lack of training in online search techniques, along with the limited number of terminals available in libraries (p. 248).

Fenichel and Harter (1981) point out some of the problems that American schools of library and information science face in the attempt to provide online training to students. The authors mailed questionnaires to all library schools either accredited by the American Library Association's Committee on Accreditation or members of the Association of American Library Schools, and to a few other schools with programs in school media, or library or information science. Seventy-five percent of the

respondents cited cost as a hindrance to the growth of online instruction at their schools (p. 40).

Fenichel and Harter also consider the problem the schools have with finding faculty with sufficient training to teach online searching:

> In some schools, there are no adequately trained faculty, because faculty teaching subject bibliography and reference courses resist online training. Either these faculty members do not want to be bothered with routine training for practical reasons or they truly feel that it is not appropriate. In other situations the problem is simply that the funds and opportunity for training these faculty do not exist. (p. 40)

Fenichel and Harter offer no easy answers to the problem of cost. Online training for students will dent an institution's budget; the question is whether the institution is willing or able to withstand the dent. As for faculty training, the authors suggest that schools offer online training through continuing education programs and provide their faculty with teaching aids to help them present online searching concepts (p. 40).

In separate works, Fenichel (1980), Penniman (1981), and Meadow (1983) consider the effects of online searching experience (not necessarily formal training) on searching behavior while Broadus (1983) reviews a Council on Library Resources study on the relationship of computer experience with the use of online catalogs at libraries.

The subjects in Fenichel's study performed searches on the ERIC Database. Penniman's subjects performed searches on the National Library of Medicine's Medline Database, while Meadow created a database and multilevel language for his study. In the study reviewed by Broadus, researchers investigated users of 16 different online catalog systems.

Researchers in each study classified the subjects as inexperienced, moderately experienced, or experienced, according to searching experience or general experience with computers. Fenichel further divided her moderately experienced and experienced groups of searchers into two categories each--those not familiar with the ERIC Database and those familiar with the ERIC Database.

Fenichel and Meadow identified communities of users that satisfied their requirements for experience levels and drew subjects from these pools. Fenichel chose her novice group of searchers from an introductory library and information science course at the Drexel University School of Library and Information Science, while Meadow's inexperienced subjects were postgraduate education students from the University of Sheffield and Sheffield City Polytechnic with less than a term of formal study in

computer programming or online searching. Meadow selected postgraduate education students with some computer background for his moderately experienced group, and for his experienced group, he chose computer science faculty members, or third-year computer science students at Sheffield City Polytechnic with at least one year's work experience. Fenichel selected search analysts as her moderately experienced and experienced subjects, determining their degree of experience by questioning them about their education, online training, online working experience, and the institutions for which they worked.

Penniman and the investigators from the Council on Library Resources study did not recruit subjects; instead they watched users work on systems over an extended period. Penniman guessed at the Medline users' experience according to the time they spent on the system while he was watching. Researchers from the Council on Library Resources study distributed questionnaires to library patrons--both those using and not using online catalogs--that asked about their computing backgrounds.

The studies, although they did not consider the relationship between searching experience and the use of particular searchable fields to retrieve citations,

did relate searching or computing background to the overall effectiveness of a search, which includes the use of appropriate searchable fields. Fenichel found that with her subjects, ERIC experience only slightly increased the chances of a successful search. In her evaluation of search outcomes, Fenichel considered recall and precision, variables concerned with the relevance of citations to the needs of the searcher. Recall measures the extent to which a search retrieves relevant citations, whereas precision measures the extent to which a search excludes irrelevant citations. Fenichel also measured the cost effectiveness of the searches by calculating how quickly the searchers retrieved relevant citations. Fenichel found no significant difference in the precision of the searches performed by her subjects. The most experienced ERIC searchers obtained the highest recall in their searches, while the recall of the moderately experienced ERIC searchers fell below that of the experienced searchers unfamiliar with ERIC. The lower recall values might be explained by the fact that the moderately experienced ERIC searchers performed the briefest, most cost-effective searches (pp. 341, 346-347).

Fenichel also considered the amount of effort that the groups of searchers put into their searches. She defines search effort as "the amount of searching done to satisfy a request" and considers such variables as the number of commands used, the number of modifications to the search strategy, and the time spent searching. Fenichel's experienced searchers who were familiar with the ERIC Database expended the most effort on their searches, and consequently retrieved the most relevant citations. In contrast, the moderately experienced ERIC searchers performed the least extensive searches. Fenichel notes that most of the moderately experienced ERIC searchers worked in institutions that charge individuals searching costs. These searchers indicated on a background questionnaire that they felt the most pressure to keep costs down. This group's desire for cost effectiveness may well explain the brevity of the searches they performed for Fenichel's study. The search efforts of the novices and the experienced searchers not familiar with ERIC fell in between those of the two experienced groups familiar with ERIC. The novices and the "expert" searchers with no ERIC experience expended more effort on their searches than did the moderately experienced searchers not familiar with ERIC, possibly indicating that this moderately experienced group also

felt some pressure to keep costs at a minimum (pp. 344-345).

Penniman also investigated the search efforts of his subjects. In contrast to Fenichel's earlier findings, he claims that his moderately experienced subjects expended the most effort on their searches, followed by the very experienced and then the novice subjects (p. 39). Penniman offers no explanation for the discrepancy, but Fenichel's and Penniman's "moderately experienced" searchers may have been members of entirely different searching populations. Fenichel recruited search analysts as her moderately experienced subjects, whereas Penniman defined his moderately experienced subjects according to the time they spent searching the Medline system while he observed. Fenichel asked her subjects to perform searches under controlled conditions; Penniman watched searchers go about their business on the Medline system in their own territory.

While some of Fenichel's and Penniman's subjects were acquainted with the ERIC and Medline Databases, Meadow's subjects, although they differed in searching or computing experience, were all up against an unfamiliar search system. Meadow's study focuses on search performance and attitude toward a search system in the light of general searching or computing experience, the

complexity of the search system (as determined by the system's language), and practice with the search system (p. 5). Meadow claims that search performance does increase with practice; he finds experience to be a reliable indicator of overall search effectiveness. A match between a user's skill level and system complexity seems to further increase the chances for searching success (p. 64).

As searchers' skill levels increase, however, their searching needs may change. Meadow suggests, as does Broadus (p. 463), that inexperienced users will not hold well-defined opinions about systems, because as novices, they are unable to adequately identify their searching needs. As searchers gain experience, their satisfaction with less complex systems will decrease; with experience they will increasingly prefer more powerful, complex systems (pp. 2-3, 64). Broadus notes that in the Council on Library Resources Study, the subjects with more extensive computing backgrounds were only slightly more likely to consult online catalogs and indicate satisfaction with them than those library clients with less computing experience (p. 462). But, along with Meadow, he asserts that systems must be responsive to the needs of different users: "There may be small minorities whose work is socially significant and who badly need

some features that the vast majority ignore or perhaps find confusing" (p. 466).

The studies of the relationship between searching or computing background and searching behavior appear to be somewhat contradictory. All of the investigators seem to agree that experience is an important indicator of effective searching behavior. The major discrepancies appear in the findings about search effort as related to experience. (Search effort is not necessarily an indicator of successful searching; in Fenichel's study, those subjects who expended the least effort performed the most cost-effective searches, while those searchers who expended the most effort performed the most comprehensive searches. In different situations, success may be determined either by cost effectiveness or comprehensiveness). Fenichel's and Penniman's findings about the search efforts of moderately experienced searchers seem to be in direct opposition. However, the two researchers were observing searching populations operating in entirely different environments. It seems that situational context may be a greater indicator of search effort than is searching experience.

During my research, I worked with the producers of the ERIC Database and three major online ERIC vendors--System Development Corporation (SDC), which offers ERIC

on its ORBIT system; Lockheed, offering ERIC on the DIALOG system; and Bibliographic Retrieval Services (BRS). I had varied experiences in my relations with the vendors. The following section includes some background information on the producers of the ERIC Database and its three major vendors and considers searchers' perceptions of their products and services.

Unruh (1981) surveyed database producers and online vendors to see what search aids they provided to searchers. She classified database producers as either for-profit corporations, nonprofit organizations, or government agencies. The ERIC Database is produced with funds from a government agency, the U.S. Department of Education. The results of Unruh's survey indicated that the for-profit database producers generally provide the most reference material to searchers, including search aids and search hints, followed by the nonprofit and government producers. Unruh does mention that ERIC has published a bibliography of literature about the ERIC database, some of which includes searching aids and hints. Government producers do, however, provide the most thesauri to their searchers, followed by the nonprofit and for-profit producers. Several government databases make use of the ERIC thesaurus (pp. 8-9, 12-13).

Unruh's results indicate that government producers offer controlled vocabularies (thesauri) to searchers at the lowest average cost. The for-profit database producers provide search aids at the lowest average cost, followed by government producers. Government producers provide free controlled vocabularies for two databases, while for-profit producers provide three vocabularies at no cost to the searcher. Although she didn't come across many free materials in her survey, Unruh notes that some of them are quite useful search aids (pp. 14, 19). Unruh mentions that online vendors are additional sources of search aids--their materials often include search hints, in addition to information about the systems.

Unruh notes that database producers offer training sessions for searchers in addition to reference materials, but she doesn't address the availability or cost of these sessions by producer category. Online vendors also offer training sessions for searchers. Tallon (1982) cites as one of the recommendations of a BRS Study Committee that training be arranged for all search librarians upon a library's subscription to BRS services (p. 5).

Halperin and Pagell (1983) studied searchers' perceptions of seven online vendors, including SDC, BRS, and Lockheed. The authors identify Lockheed's DIALOG,

SDC's ORBIT, and BRS as the "database supermarkets," each offering access to between 40 and 140 databases and regularly adding new databases to their offerings. While BRS offers fewer databases than either SDC or Lockheed, its services are cheaper, making it a major competitor (pp. 120-121). Halperin and Pagell asked librarians and information specialists to rank seven database vendors according to service attributes and overall preference. Most of the respondents worked in academic or for-profit institutions and most often searched business databases.

After ranking service attributes according to perceived importance, subjects in the study rated seven online vendors according to each attribute. The attributes follow in ranked order: system reliability, the variety of databases offered, flexibility of command languages, the pricing of services, the quality of training and documentation, innovativeness, hours of service, the availability of a toll-free hotline, print formats, numeric data availability, document delivery, and the selective dissemination of information (SDI). Respondents also ranked the vendors according to overall preference.

Results show that Lockheed consistently rated first in the service attributes, even with respect to pricing, despite the fact that BRS offers services at lower rates.

BRS ranked second in most cases and SDC, third. The exceptions to the ratings are that BRS ranked third in document delivery, behind SDC, and fourth in the availability of numeric data, behind Dow Jones, which produces a numeric database, and SDC. Lockheed also rated first in overall preference, followed by BRS and SDC (p. 122).

Halperin and Pagell note a significant relationship between the frequency with which their subjects searched on a particular system and their overall vendor preference. The majority of respondents (77%) searched frequently with the DIALOG system. DIALOG's producer, Lockheed, ranked the highest in vendor preference. BRS, the second vendor in order of preference, offered the second most heavily used system--thirty-three percent of the respondents searched with it frequently. SDC ranked third in vendor preference; its ORBIT system ranked fifth in usage behind the vendors of the New York Times and Dow Jones systems (p. 122). Halperin and Pagell conclude by raising a question about the relationship between the preference of online vendors and the use of their services: Do searchers favor a particular online vendor because they frequently use that vendor's services, or do searchers frequently use a vendor's services because they perceive that vendor as being superior (p.126)?

These research findings helped me to identify the audience to which I would direct my writing. The guide would probably come into the hands of searchers with all levels of ERIC experience. ERIC clearinghouse searchers with extensive experience would see it and students with minimal or no searching experience might see it. However, the searchers visited by the User Services Specialist seemed to most closely represent the population of practicing ERIC searchers.

These moderately experienced ERIC searchers would place two demands on the guide--those of clarity and conciseness. They would require clear explanations because they lack formal online search training. They would demand conciseness because they can't waste precious connect time trying to figure out how to use the searchable fields. With a guide meeting their demands, these searchers could choose appropriate searchable fields, thereby increasing their searching efficiency.

By directing the guide to the moderately experienced searching audience, the User Services Specialist and I were also able to address reference needs of searchers with more experience. However, because of space considerations, we had to choose against including information that specifically addressed the needs of the novice searcher.

Unruh's findings show a need for search aids covering government databases (of which ERIC is one) while Halperin and Pagell's study confirmed our choice to include field labels for BRS, Lockheed's DIALOG, and SDC's ORBIT--the systems overwhelmingly preferred by ERIC searchers.

The Reference Document and Its Makings

After the User Services Specialist and I had a good understanding of the problem--ERIC searchers lack awareness of the searchable fields available for their use--we set out to confront it with a reference guide to ERIC's searchable fields. We discovered that there are no quick tricks to developing a quick reference guide. Rather, we faced the monumental task of condensing a mountain of information into a molehill of a document. This section cites research and advice about the tasks involved in creating a reference document: planning, preparing drafts of the document, testing documents in the field and using the results to revise the document, preparing and reproducing the final version of the document, and distributing the document.

Planning is the essence of the development of a reference document (or any document for that matter). A document may be the result of good planning or poor

planning, but unless some planning is involved, the document will never come to be. Assael and Trohanis (1983), Bodmer (1983), Degener (1980), Far West Lab's Guide to Producing Print Materials (1979), Arden and Whalen (1978/1979), Elkins and Byman (1976), and Volkmann (1976/1979, 1979), stress the importance of preliminary document planning tasks. These tasks include budgeting time and money; looking over existing documents that address an identified problem or reading audience; preparing typesetting and printing specifications and soliciting bids; selecting typesetters and printers and determining production schedules; and soliciting and scheduling the services of writers, editors, and graphic artists.

The authors mentioned above offer numerous tips for cutting publications costs. Cost-saving measures include putting thought into the number of documents to be printed; purchasing paper in bulk and storing it; using standard paper sizes; using the lightest-weight paper possible; using stock colors for printing; taking advantage of offset printing and web presses; using the services of quick printers; considering alternatives to commercial typesetting such as in-house typesetting equipment; and if a document is to be typeset, editing

before it goes to the typesetter. Caernarvon-Smith (1983) cautions her readers against typesetting a document for the less-than-noble motives of showing off, or dressing up ugly communication (pp. 40-41). International Paper Company's Pocket Pal (1979) offers a host of information and tips about all aspects of the publication process.

Assael and Trohanis (1983), Addison (1982), "Quick References" (1986), Moffett, Smith, and De Amicis (1985), Benson (1985), Murch (1985), Smith (1984), and Trent (1982) offer hints about developing reference documents and brochures. Moffett et al. and Smith emphasize the importance of estimating costs before developing and printing brochures. Smith observes that the text of a brochure must be clear and at the same time concise. He contends that a brochure should never be designed internally, even by an in-house graphics department, but should be contracted to graphic design professionals. Although the other authors have no apparent aversion to the internal design of a document, most do suggest soliciting at least the advice of a professional designer.

Addison, Moffet et al., and Murch address color considerations for printed materials. Moffet et al. mention that with full-color printing, "pleasing color"

can be more economical than "perfect" or "critical" color--the exact duplication of color in original artwork (p. 19). Addison mentions that color is a useful tool to set off a brochure's headings, major sections, or outline (p. 21). Murch considers human perception in his guidelines for effective color usage. He asked subjects to rate color combinations in terms of their appeal. A favorite combination was that of a green background with black text. A white background with blue text was also popular. Some of the least favorite combinations were yellow text on a white background and blue text on a black background. Murch suggests that technical communicators take advantage of opposing colors for small and simple displays, thereby sparing the reader the task of discriminating colors (pp. 18-20).

Addison underlines the importance of white space in a brochure: "In creating a feeling of space around the most significant headings, subheadings, and major supportive points, the writers are careful not to overwhelm the readers. The white space says, 'There isn't much to take in, and there's plenty of time--so relax'" (p. 21). "Quick References" notes another benefit of white space--it gives the reader room to jot down useful notes (p. 2). Benson considers, along with white space, the roles typeface, case, type weight,

type size, and line justification play in lending a document an attractive and relaxed image. Her suggestions include avoiding the exclusive use of uppercase letters, using a medium-weight type, and choosing ragged right margins over justified text (pp. 36-38).

Trent reminds his readers that the title of a brochure may determine whether a person will pick it up and look at it. He conducted a study in which he displayed two sets of pamphlets that had identical content but different titles. One set of pamphlets had subject-oriented titles while the other set had "how-to" titles. For example, a pamphlet from the first set, titled "Milk in the Diet," had a counterpart in the second set with the title "How to Build a Great Body." The pamphlets were advertised as free publications. Seventy-five percent of the publications that people chose were from the set with "how-to" titles.

Assael and Trohanis (1983) and Degener (1980) discuss options for folding and mailing brochures. Options for folding include a regular letter fold or an accordian fold. Print shops use machines for most sizable folding jobs. Brochures designed as self-mailers, with the rear panel reserved for postal information, will save the time and expense involved with stuffing envelopes and can be mailed at the cheaper bulk postage rate.

Mills and Dye (1985), Ridgway (1985), and Soderston (1985) discuss testing documents in the field with users. The authors advise that test populations be chosen with great care--the test subjects must resemble the intended reading audience as closely as possible. Ridgway discusses user surveys as means of determining document effectiveness. She considers the relative merits of personal interviews, telephone interviews, and mail surveys. While questionnaires are the essence of mail surveys, Ridgway also suggests using outlines or questionnaires for personal and telephone interviews. Although mail surveys may be the most convenient method of soliciting opinions about a document, Ridgway cautions that they also yield the least reliable results. Many users will not respond to a mailed questionnaire; those who do often voice strong opinions that may not accurately reflect the sentiments of the users as a whole. Because the user chooses whether or not to respond to the mailed questionnaire, the test population is less random than that solicited by personal or telephone interviews.

Telephone surveys generally eliminate the problematic results of mail surveys--a handful of responses tainted by the strong opinions of a few users. (Of course a user does have the option of refusing to be

interviewed or simply hanging up the phone--Ridgway, however, found her subjects to be very cooperative during phone interviews.) Ridgway stresses the care with which telephone questionnaires must be prepared. The questions must be easily understood over the phone, and the questionnaire must be fairly brief so as not to extend the user beyond his or her "telephone threshold." Ridgway suggests that most people can't answer questions over the phone for longer than 20 minutes.

Ridgway notes that a skilled interviewer can gather priceless information by surveying users in person. A variation of a one-on-one interview is a group discussion moderated by the interviewer (p. 21). Ridgway offers some general advice about preparing questionnaires and interviewing users. While questions shouldn't be threatening, or loaded, Ridgway suggests asking the user specifically about whether and how he or she uses the document. She recommends that the surveyor ask the user for advice, thereby encouraging the user to take a personal interest in the document (p. 20). Assael and Trohanis (1983) remind their readers that the physical appearance of a questionnaire determines in part the effort that a respondent is willing to spend (p. 25).

Mills and Dye (1985) and Soderston (1985) evaluated the usefulness of documents by watching test subjects

work with them. Mills and Dye discuss, in addition to subjective measures of usability (interviews and questionnaires), observational logs, verbal protocols, and objective usability measures. Observational logs record the behavior of subjects that bears on the completion of a task. An observational log might contain notes about how long and at which points in a task a user referred to a document. Verbal protocols are records of subjects' thinking out loud. Objective measures of usability take into account such variables as the speed with which a subject completes a task, the number of errors the subject makes, the points in the task at which the errors occur, and the number of times a subject asks for help (p. 42).

Mills and Dye offer hints about interpreting results from field tests. Observational logs and verbal protocols can uncover problems in document clarity or organization. Subjects may express bewilderment verbally or by wrinkling eyebrows. If subjects are having to shuffle between pages to find what they need, there may be a logical problem with the order of presentation. Error counts, time measures for task completion, and requests for help can indicate the effectiveness of specific sections of a document (p. 43). Ridgway (1985)

summarizes the utility of results from questionnaires and interviews:

> In short, you use survey results to verify definitions of tasks and users and to gather user opinions about the information. These opinions, although highly subjective, can be shown to be valid if the sample is large and representative. By structuring the survey questions carefully, you. . .can find out what factor affected users' judgments and deduce what improvements will have most effect. (p. 22)

Mills and Dye (1985) suggest two methods of incorporating test results into document revisions. The first option is to attend to the document's most serious problems first (as determined by the test), and, as time and money permit, to address other concerns that the test reveals. The second method involves setting performance criteria before testing the document. The criteria might include limits on errors, requests for help, or the time needed to complete a task. Alternatively, the criteria might require that a certain percentage of subjects give the document a favorable opinion rating. This plan calls for continuous revision of the document until it enables test subjects to meet the criteria (p. 43).

Soderston (1985) notes the impact that a user's insight can have on a document:

> For a technical writer used to operating with little immediate feedback from the field, watching and listening to the test subjects can be one of the most exciting parts of a writing project. In my own experience, the gaps and ambiguities that my test

> subjects revealed were totally unexpected, because the material had already gone through many technical reviews. (p. 18)

The research cited above served as a theoretical foundation upon which to build the reference guide to the searchable fields in ERIC. The findings about database searchers and their relationships with the producers and major online vendors of the ERIC Database helped me to define the audience for which I would write. The tips on reference document development would help the User Services Specialist and me make decisions in each step of the production process: from setting a production schedule to choosing ink colors; from testing the document in the field to distributing the final version.

CHAPTER 3. METHODOLOGY

The preceding literature review cites the experiences and advice of researchers who studied database searchers--the audience we wished to reach with our reference guide. The review also cites the experiences and suggestions of persons who have developed reference documents. This chapter gives an account of our experiences as we identified our audience and developed the guide to the searchable fields in ERIC.

The User Resources Specialist at ERIC/CRESS realized during her 1984 visit to regional ERIC searchers that they were not aware of all of the searchable fields at their disposal. In the proposal to the U.S. Department of Education's Office of Educational Research and Improvement, the staff at ERIC/CRESS stated its intentions to address the problem by developing a reference guide to the searchable fields in ERIC. In the proposal, ERIC/CRESS estimated printing 3,000 copies of the guide and distributing them to ERIC searchers. The proposal mentioned that ERIC/CRESS might recruit the help of online vendors to distribute the guide. The proposal also stated that drafts of the guide would be reviewed by the 15 other ERIC clearinghouses and by some of

ERIC's standing-order customers. As it turned out, we printed 100 drafts of the guide, which were reviewed by some 60 different persons. We printed and distributed 18,000 copies of the final version.

By the time I took a part in the project, the problem had been identified, the proposal had been written and approved, and the necessary funds had been acquired. My task was to develop a guide that would meet the searchers' needs.

I began by acquainting myself with the ERIC Database. I had never searched a database, so I spent some time talking to the User Services Specialist and reading about searching. After I completed my preliminary research, I met with the User Services Specialist and we drew up a preliminary production schedule for the guide. The preliminary schedule called for us to distribute the brochures by December of 1985: the final copies of the brochure rolled off the press in May of 1986. We clearly encountered several unanticipated delays.

After I had learned something about searching strategies, I called the main offices of BRS, DIALOG, and SDC to identify persons with whom I could work as I developed the guide. I sent each vendor representative a list of ERIC's searchable fields and asked that they

provide me with the labels or codes that they use to access the fields during a search. I asked that they respond as promptly as possible, since we were trying to meet a production schedule.

While I was waiting to hear from the vendors, the User Services Specialist, a freelance graphic artist contracted by ERIC/CRESS for the project, and I met to discuss the visual and tactile components of the guide. We examined several brochures and made preliminary decisions about paper, color, and graphics.

The brochures that were printed on lightweight paper seemed flimsy while those on heavier paper appeared to be much more durable. We went against Arden and Whalen's (1979) and Volkmann's (1976/1979) recommendations to save money by using lightweight paper: We decided to use a fairly heavy paper because durability is essential if a reference guide is to be used as intended. We also decided to pursue either a gloss or semi-gloss finish for the paper. The brochures without finishes felt rough and appeared somewhat lifeless in comparison to the brochures with finished paper. The gloss finish, however, seemed too slippery to me. (We also discovered that the gloss finish is quite a bit more expensive than the semi-gloss; this fact determined for the most part our decision to go with the semi-gloss.) While we didn't want to sell our

guide on appearances, we did want to encourage the searcher to pick it up and open it.

We considered ink colors for the cover and the text and graphics within the guide. We didn't seriously consider using more than two colors of ink because we knew that the cost of printing multiple colors can be prohibitive. We found a brochure cover printed in black and gold to be captivating.

When we had an idea of what we wanted in paper and ink, the graphic artist obtained bids from three local printers. (We felt that because of time constraints, it would be most convenient to deal with local printers.) We chose the lowest bidder, not just because of cost savings, but because the printer had run nice jobs for ERIC/CRESS in the past. The printer also offered typesetting services, of which we'd want to make use.

We learned from the bids that metallic inks are quite expensive. Because of cost considerations, we eventually chose black and red ink as our two colors. We used black on a white background for the text. Sixty-three percent of Murch's (1985) test subjects rated this combination as one of the best for text (p. 19). Following Addison's (1982) suggestion of using color to highlight, we used red (also on white) for the text

headings. Thirty-one percent of Murch's subjects rated this combination as one of the best for thick lines and panels (p. 19). We chose black as the dominant color for the cover and interior illustrations; we planned to highlight the artwork with red ink.

We also brainstormed about illustrations during our meetings. We decided to pursue a cover illustration that would incorporate the title of the brochure (which we were in the process of determining). We wanted to carry part of the cover design (without the title) as a motif into the body of the guide. And we wanted the cover design to portray the technology behind the ERIC Database without overwhelming the reader. After the graphic artist had some idea of what we wanted, she drafted a few cover illustrations.

Meanwhile, the User Services Specialist and I further discussed possibilities for a title. We thought about using the title "Clues to ERIC" on the cover, but because our reference guide would specifically address ERIC's searchable fields, we chose a more informative title for the cover: "Searchable Fields in ERIC: A Computer User's Guide via BRS DIALOG ORBIT." We decided to use "Clues to ERIC" as a subtitle on the inside first panel to lead the reader into the body of the guide.

When the graphic artist had finished her cover drafts, she showed them to us and the other staff members at ERIC/CRESS. We chose an illustration of a monitor and keyboard. In the design, the tips of the keys and the monitor screen appear in white. The sides of the keys and the background surrounding the keys and monitor are black. Black and white thin and thick lines outline the edges of the screen and monitor. The screen displays the official ERIC logo. We chose this illustration for several reasons. We thought that it incorporated the title nicely, it lent itself to reduction and reproduction within the body of the guide, and the keyboard seemed to have the effect of drawing the reader into the screen (and, analogously, we hoped, into the pages of the guide).

By this time, I had received a list of field labels from one of the vendors, along with some other helpful system information specific to the ERIC Database. About two weeks had passed since I wrote the vendors, so I called the other two vendors to remind them of my requests. They told me that the task was at the top of their lists.

I was working with the User Services Specialist to write definitions or notes for the searchable fields that were less than self-explanatory. We were also

considering the order in which we might want to present the fields to our audience. We decided to order the fields according to their potential usefulness (of course the decisions were somewhat subjective--the usefulness of a particular field is situational). Although we wanted to introduce the new (1984) "target audience" field to searchers, we placed it near the bottom of the list because the field will retrieve only those documents published since 1984 for which the author states an intended reading audience.

At the same time, the User Services Specialist and I were discussing potential reviewers for the draft of the guide. Our online vendor contacts, searchers at the other clearinghouses, and representatives from ERIC's central office and the ERIC Processing and Reference Facility (which produces the database) would serve as our "expert" reviewers, while searchers at regional libraries and resource centers would be our moderately experienced reviewers. We had some trouble deciding how we should recruit novice reviewers. We considered testing the drafts with persons attending training sessions offered by the online vendors, but the vendors weren't offering any regional training sessions during the time we would need to be testing. We considered recruiting personal computer users and students in introductory

computing science or education classes for a testing workshop at ERIC/CRESS. We also considered visiting classes at New Mexico State University that covered the use of computers in education. But we were uneasy about whether our recruits would have any searching background at all.

We decided to look at some regional universities with programs in library science, such as the University of New Mexico and Highlands University. I called the University of New Mexico's Library Sciences Division of the Department of Educational Foundations and talked to an instructor of a course called "Automations in the Library Field." I asked if I might visit her class and have the members review drafts of our reference guide. She agreed, but she mentioned that most of her students didn't have much searching experience. The class did cover search theory, however, and seemed an ideal source of novice reviewers. I arranged to pay her class a visit.

I had incoporated the information that I received from the vendor into our draft, along with search examples. A few weeks had passed since I called the other two vendors, and I hadn't received anything, so I called again. I received additional apologies and promises that the lists of field labels would be in the mail right away. I did receive a list within the next

few days from the second vendor, along with some search examples for the different fields. As we incorporated the field labels from the second vendor into the draft, we realized that we would not have room to include search examples. We also realized that including search examples was beyond the scope of our guide--we didn't intend to teach our audience to search, but rather to make it aware of the searchable fields and to list the vendors' field labels as a reference aid. We decided to refer searchers to the ERIC vendors and producers for information on search services and strategies.

I made several additional calls to the third vendor and received promises that the field labels were in the mail. Nothing arrived. The User Services Specialist mentioned our problems to a searcher at another clearinghouse and she suggested we contact a certain representative at another office. I called this representative, told her about our project, and asked if I could get a list of field labels. I received the list in a matter of days.

I incorporated the field labels from the third vendor into the draft, and the User Services Specialist and I determined what other information we would provide to our readers. With generous suggestions from ERIC/CRESS staff members in hand, I drafted some general

information about ERIC and borrowed some information from other ERIC publications: the list in the section titled "What Materials Does ERIC Contain?" is a reprint of "ERIC Publication Types" (1984) with a few minor editorial changes. I drafted a statement of the guide's purpose and referred readers to the ERIC online vendors and producers for information on search services and strategies. I included a glossary of acronyms, a disclaimer (required for publications funded with government money), a note that identified ERIC/CRESS as the developer of the guide and the User Services Specialist as a contact, and ordering information for ERIC products and addresses for the online vendors.

We had not originally planned to typeset the drafts, but the User Services Specialist decided that in the interest of our production schedule, typesetting might be a good idea. (We had already fallen far behind because of delays with the online vendors. Our preliminary schedule called for the final version of the guide to be printed in December of 1985. We soon realized that this target date was not realistic, because we would be corresponding with the vendors, and some of the reviewers, through the mail. Early on in the project, we moved our target date back to March 1986. As we experienced delays with the vendors, however, we

realized that we would be fortunate to have the draft out for review by March.) We did gain some breathing space when we were ready to print the final version because the bulk of the typesetting was done; only the revisions required additional typesetting. However, by typesetting the draft, we seriously limited our revising options because the cost of typesetting a completely overhauled guide would have been prohibitive.

We also decided to print the draft of the guide. We thought it might be nice to have some feedback on the cover design, the paper, and the color combinations. Caernarvon-Smith would likely accuse us of "dressing up" the draft by having it typeset and printed, but the reviewers seemed to find no problems in marking it up.

We had the draft set in Helvetica type with ragged right margins. I proofread the typeset copy at the printer and discussed corrections with the typesetter. I made copies of the corrected typeset copy, and the User Services Specialist and I met to discuss the layout of the guide. I prepared a mockup of the guide for the typesetter, and she set type sizes for the sections according to the amount of space we had set aside. When we had approved the typesetter's final layout, we had the printer print 100 copies of the draft.

We used 70-pound semi-gloss white paper for the draft and the final version. Both versions were printed on 8 1/2 by 19 inch sheets. We had the sheets folded with a regular letter fold into ten panels. The printer and I folded the drafts by hand; since there were only 100, it was hardly worthwhile to set up the folding machine for the job. The machine came in very handy, however, with the 18,000 copies of the final version. In the draft, the type size ranged from 6 to 18 points. Although we would have preferred a larger type, we had to use 6-point type for the list of searchable fields and labels because of space considerations. For the draft, we used only black ink in the cover design. We used red and black ink for the cover motifs in the body of the guide. We also used red ink for the section headings. The draft appears as Appendix B.

While the draft was being typeset, I developed a search exercise and several versions of a questionnaire to use in our field tests. For the novice student reviewers, I developed a search exercise in which they were to choose the searchable field with which they could most efficiently complete a given task. I developed a questionnaire for the students to fill out after they had completed the exercise. In the questionnaire, I asked students about their familiarity with the ERIC Database

and about their searching background. I also asked students how they used the guide during the search exercise, and I asked for their impressions of the guide and any suggestions for its improvement. I would personally administer the exercise and questionnaire to the class during my visit. The exercise and questionnaire that I prepared for the students appear as Appendix C.

For the moderately experienced ERIC searchers at regional libraries and resource centers, I prepared a questionnaire that appealed to their search experience. This questionnaire appears as Appendix D. I asked these searchers if they had felt a need for the information presented in the guide. I asked them how they might use the information. I asked for their general impressions of the guide and suggestions for revisions. Because the 65 regional searchers were geographically dispersed, I planned to mail them the questionnaires. I did not prepare a search exercise for either the moderately experienced or expert ERIC searchers because I knew these searchers would have the opportunity to use the draft during an online search if they so desired.

I prepared a telephone survey for the searchers at the ERIC clearinghouses. It was essential for our funding purposes that the draft be reviewed by

representatives from each clearinghouse, and we felt our best bet was to deal with them by telephone rather than through the mail. The telephone questionnaire was almost identical to that for the moderately experienced ERIC searchers. (I asked the moderately experienced searchers if they felt the guide would influence their searching strategy, but I spared the clearinghouse searchers this question, since they are well aware of the fields available for their use.) Also, I planned to use the questionnaire only as an outline for my telephone interviews. If an interview seemed to be leading to insights that I had not anticipated, I would deviate from the outline. The telephone survey appears as Appendix E.

I didn't use questionnaires with the online vendor representatives or the reviewers at ERIC's central office and the ERIC Processing and Reference Facility since these reviewers weren't necessarily searchers. I planned to telephone them for their responses after they received drafts.

As soon as the User Services Specialist and I received the drafts from the printer, we mailed them to the 15 ERIC clearinghouses, the ERIC central office, the ERIC Processing and Reference Facility, the 3 online vendor representatives, and the 65 regional ERIC searchers. I enclosed questionnaires with the

drafts for the regional searchers. About a week later, I began interviewing the clearinghouse searchers by telephone and calling the online vendors for their responses. During this time, persons at ERIC's central office and the ERIC Processing and Reference Facility discussed their opinions with the User Services Specialist.

Around this time, I tested the draft with 24 students at the University of New Mexico. I had expected to meet only with members of the "Automations in the Library Field" class; however, spring break was about to begin and several of the students had already left town. Consequently, the instructor decided to also have members of her cataloging class review the draft. I introduced myself to the class, told the students about our project, and asked that they read the draft, complete the exercise, and fill out the questionnaire. I asked that they not talk among themselves during the exercise but told them that they were free to ask me questions. While the students worked with the guide, I kept an informal observational log of their behavior.

After I returned, I finished interviewing the clearinghouse searchers by phone and started evaluating the results of both the telephone interviews and the

class exercise. I had not yet received any completed questionnaires from the regional searchers, and I wasn't sure how many responses I should expect from them. I eventually received responses from 15 of the 65 regional searchers (a 23-percent return). I had quite a bit of latitude with the responses from the regional searchers, because this review group was much larger than the other two. Nevertheless, I ended up with the fewest responses for this group. Table 1 indicates the makeup of the solicited reviewers by ERIC experience. Table 2 shows the methods by which I tested the draft with the different reviewer groups, and Table 3 indicates the response rate of each group of solicited reviewers.

As we obtained responses from the regional ERIC searchers, we began to recognize patterns. Reviews by the students were generally unfavorable. I noted in the observational log a good deal of consternation as they worked on the search exercise. I recorded the following and similar comments from students: "Can you give us a hint of what we're doing?". . ."Too much for not knowing how to search". . ."A little bit ambiguous--like learning a foreign langauge." I suspect that the students may have been more confounded by the search exercise than by the guide itself.

Table 1. Solicited Reviewers by ERIC Experience.

ERIC Experience	Number of Reviewers Solicited
Little or No	24
Moderate	65
Substantial*	21

*includes 15 searchers at ERIC clearinghouses, 3 online vendor representatives, 2 reviewers at ERIC's Processing and Reference Facility, and 1 reviewer at ERIC's central office

Table 2. Testing Strategy by Reviewer Group.

Reviewer Group	Testing Strategy
Novice	Personally-Administered Search Exercise and Questionnaire, Observational Log
Moderately Experienced	Mailed Questionnaire
Expert	
Clearinghouse Searchers	Telephone Survey
Vendor Representatives	None*
Central ERIC Office Representative	None*
ERIC Processing and Reference Facility Representatives	None*

*We didn't use formal testing strategies with these reviewers; we did, however telephone them for their responses.

Table 3. Response Rate by Reviewer Group.

Reviewer Group	Response Rate
Novice	100% (24 responses)
Moderately Experienced	23% (15 out of 65 potential responses)
Expert	100% (21 responses)

I also assumed more searching background on the part of the students than most of them possessed (especially in the case of the students enrolled in the cataloging course). On the questionnaire, most of the students (understandably) indicated that search examples would be helpful. Several students mentioned that the glossary was helpful. One student said that information on vendor prices would be helpful. Another student mentioned having difficulty keeping the field descriptions and labels lined up and suggested that we rule the guide horizontally.

The responses we received from the regional searchers, clearinghouse searchers, vendor representatives, and the persons at ERIC's central office and

Processing and Reference Facility were generally favorable. Several of the regional searchers indicated that search examples would be helpful. One of the clearinghouse searchers mentioned that she thought most searchers search with primarily one system (as does the User Services Specialist at ERIC/CRESS). She suggested that in addition to the edition that lists field labels for all three vendors, we consider publishing editions specific to each vendor. In the single-vendor editions, we would have room to include search examples specific to the vendor's system.

Another clearinghouse searcher questioned the intended audience of the publication. She noted that since the guide contained no search examples, it seemed to be directed toward a fairly sophisticated searching audience. At the same time, however, the introductory information about ERIC was very basic; it assumed that the audience might be unfamiliar with ERIC. She definitely had a point, but we wondered about the experienced searcher just becoming acquainted with the ERIC Database. Might not that person want to know something of ERIC's background?

Several of the searchers from both review groups commented that the listings of publication types and

codes and ordering information and vendor addresses were convenient.

One clearinghouse reviewer echoed Addison's (1982) advice and suggested that we break the information on the first inside panel into chunks. Reviewers from all the groups voiced strong opinions about the cover--they either loved it or hated it. Those who approved did suggest that we carry the red into the cover design.

The searchers, along with the vendors and the representatives from the ERIC Processing and Reference Facility, informed us of inaccuracies pertaining to the field labels. (Since the User Services Specialist primarily searches with one vendor, we were grateful for the technical reviews by vendors and searchers familiar with specific systems.)

In order to deal with the countless suggestions for revisions, I went through all the questionnaires and telephone surveys and listed each unique suggestion. I then went through my list and starred the revisions that I felt essential to the guide's accuracy and clarity. The User Services Specialist and I addressed the starred suggestions first, and then moved on to the others as time permitted. (Of course we disagreed with some of the suggestions.) The list of suggestions appears as Appendix F.

We decided to break the introductory information on the first inside panel into chunks, but to do this we had to decrease the type size from 8 to 6 points. Nevertheless, we felt that the extra white space would be easier on the reader. I rewrote some of the introductory information and added some explanatory information about the searchable fields; to accommodate the additional information, we shifted the glossary to the next panel and the disclaimer to the following two panels. We increased the type size of several headings, reordered the headings above the list of searchable fields, and decided to carry some red into the cover design. After we incorporated the revisions, we had the typesetter make the indicated changes to the draft.

After the typesetter made the changes, we sent copies of the typeset copy to the vendor representatives and to the reviewers at ERIC's Processing and Reference Facility for their final approval. I phoned them and received the go-ahead, so we made arrangements for the final printing. Some time earlier, the User Services Specialist had increased the order of final copies to 18,000--quite a jump from the original 3,000 copies we had planned.

CHAPTER 4. CONCLUSION

I didn't become involved with the distribution of the guides because I moved out of town, but the User Services Specialist let me in on their whereabouts. Although we designed the guide so it could be a self-mailer by reserving the back panel for postal information, the guide has left ERIC/CRESS by boxfuls. ERIC/CRESS sent 1000 guides to each clearinghouse, 100 each to BRS, Lockheed, and SDC, and 20 guides to each of its regional standing-order customers. Staff members at ERIC/CRESS and other clearinghouses have distributed the guide at conferences. ERIC/CRESS has received written requests from about 30 individuals for the guide. As a follow-up study, ERIC/CRESS might want to investigate the other clearinghouses' channels of distributing the guide.

However, it seems that the information in the guide will be available to anyone who might want it. The body of the guide appears, reduced and reproduced, in the front section of the 1987 edition of the ERIC thesaurus. Does this fact make our guide to the searchable fields in ERIC a success story? I'm not entirely sure.

We developed the guide to confront a specific problem--ERIC searchers were not taking full advantage of the searchable fields at their disposal. The searchers were unaware of the existence of some of the fields and didn't know how to use others in their searches. The mission of our guide, then, was to introduce ERIC's searchable fields and explain their usefulness, and to list field labels as a reference aid.

We expected the guide's reading audience to primarily consist of moderately experienced ERIC searchers and we recognized these searchers' demands for clarity and conciseness. The moderately experienced searchers gave the guide generally favorable reviews. Many of them found the guide easy to read (a measure of clarity) and located information with little difficulty (a measure of conciseness). Most of these searchers indicated that the information on the searchable fields (both the definitions and the field labels) was quite useful. However, several of them stated that search examples would be helpful.

Most of the clearinghouse searchers gave the guide favorable reviews. Many of these reviewers indicated that they would benefit from the lists of field labels. Very few of the clearinghouse reviewers suggested search examples. The student reviewers, on the other hand,

pleaded for search examples; they saw the guide as nothing more than a mishmash of confusion.

The reference guide to the searchable fields in ERIC seems to be most effective and useful for "upper-moderately experienced" ERIC searchers; they benefit both from the field descriptions and the list of field labels. Expert ERIC searchers may find the list of field labels useful, but they probably don't need the explanations of the fields. Novice and "lower-moderately experienced" searchers probably benefit the least from the guide because their greatest need is for information on basic searching strategies. Although the guide seems most useful to fairly experienced ERIC searchers, it's very difficult to tell in whose hands a nationally distributed publication will end up. However, with practice, novice searchers become experienced searchers. Novice searchers who pick up the guide and hold onto it may find some day that it's just what they need.

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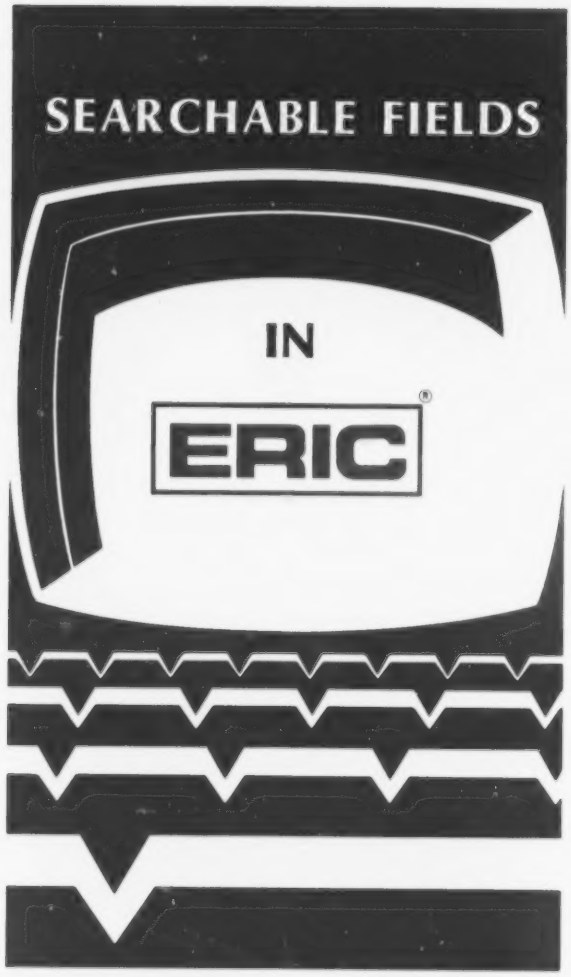
APPENDIX A. REFERENCE GUIDE TO THE SEARCHABLE FIELDS IN ERIC: FINAL VERSION



A COMPUTER USER'S GUIDE

VIA

BRS DIALOG ORBIT

Clues to ERIC

ERIC is the Educational Resources Information Center, formed in 1966 to offer users access to the world of educational literature. Today the ERIC database is one of the nation's largest bibliographic databases, having indexed over half a million documents in the field of education.

Two subfiles provide online access to the ERIC database: **Resources in Education** (RIE) and **Current Index to Journals in Education** (CIJE). RIE provides bibliographic information and abstracts for a variety of educational documents. RIE documents (identified by "ED" Accession numbers) are available on microfiche at over 700 libraries and educational institutions in the United States. CIJE is an annotated index to articles on education from more than 760 journals. CIJE documents (identified by "EJ" Accession numbers) can be found at any library that carries the referenced journals. RIE and CIJE indexes are available in printed form at over 2,000 libraries and educational service centers throughout the United States and abroad.

This reference guide introduces and explains major searchable fields of the ERIC database and presents field access labels (field access commands) of three online ERIC vendors—BRS, DIALOG, and ORBIT. The guide also lists the codes necessary for searching particular ERIC fields. Some fields are not searchable by certain vendors; in such cases, the space for the field access label is left blank. Explanatory notes and instructions concerning the field access labels appear in italics.

The vendors offer different options for searching ERIC. Contact the vendor of your choice for information about search services. Although many searching options are available, for precision searching you are encouraged to use the controlled vocabulary in the **Thesaurus of ERIC Descriptors.** For further information on search strategies, contact the ERIC Processing and Reference Facility, which will refer you to the appropriate ERIC Clearinghouse. Addresses for the vendors and the ERIC Facility, along with names of the ERIC Clearinghouses, appear later in this guide.

ERIC's Searchable Fields and Vendors' Field Access Labels

SEARCHABLE FIELD	FIELD LABEL		
ERIC	**BRS**	**DIALOG II**	**ORBIT**
1. Descriptor—describes subject fields with terms in ERIC thesaurus			
a. Multiword Descriptor	*-hyphen*	*no label necessary*	*no label necessary*
b. Descriptor Word(s)—word(s) within descriptor	.DE.	/DE	/IW
c. Single-Word Descriptor	.MJ,MN.	/DF	/IT
d. Major Subject Descriptor	.MJ.	/MAJ	*
e. Minor Subject Descriptor	.MN.	/MIN	
2. Identifier—describes subject fields with terms not found in ERIC thesaurus			
a. Multiword Identifier	.ID. *(free text)*	*no label necessary*	*no label necessary*
b. Identifier Word(s)—word(s) within identifier	.ID. *(free text)*	/ID	/IW
c. Single-Word Identifier		/IF	/IT
d. Major Subject Identifier		/MAJ	*
e. Minor Subject Identifier		/MIN	

SEARCHABLE FIELD	FIELD LABEL		
ERIC	**BRS**	**DIALOG II**	**ORBIT**
3. Title	.TI.	/TI	/TI
4. Abstract/ Annotation—does not yield precision of controlled vocabulary searching, increases online search time, but useful when searching for terms just beginning to appear in documents	.AB.	/AB	/AB
5. Personal Author	.AU.	AU =	/AU
6. ERIC Accession Number—document number as found in RIE or CIJE	.AN.	*Type ED# or EJ#*	/AN
7. Clearinghouse Accession Number—number assigned to document by an ERIC clearinghouse	.CH.	AN =	/CHAN
• Clearinghouse Code—two-letter prefix to Clearinghouse Accession Number; represents an ERIC clearinghouse (See codes listed under **What Subjects Does ERIC Cover?**)	.CH.	CH =	/CC
8. Publication Year—limits search to documents published within a specified period	.YR.	PY =	/SO
9. Update	.AN.	UD =	/UP
10. Geographic Source of Document (field added 1979)—where document was published	.GS.	CP =	/LO
11. Institution—corporate author	.IN.	CS =	/OS

SEARCHABLE FIELD	FIELD LABEL		
ERIC	**BRS**	**DIALOG II**	**ORBIT**
12. Sponsoring Agency—funding agency	.SN.	SP =	/SPO
13. Journal Citation	.SO.	JN =	/SO
14. File Segment—RIE or CIJE (derived from ERIC Accession Number field)	ED.AN. EJ.AN.	/ED /EJ	RIE/FS CIJE/FS
15. Availability			
a. ERIC availability (from EDRS)		AV =	/AV
b. Alternate availability	.AV.		/AV
16. Governmental Status of Document (field added 1979)—federal, state, local	.GV.	GL =	/LO
17. Report Number	.NO.	RN =	/NU
18. Grant, Contract Number	.NO.	CN =	/NU
19. Publication Type—form of publication (See list under **What Materials Does ERIC Contain?**)	.PT.	DT =	/DT
20. Language of Document (field added 1979)—language of text	.LG.	LA =	/LA
21. Target Audience (field added 1984)—intended users—if stated in document	.ID.	TA =	/TG
22. Descriptive Note—extends description of publication, e.g., "Paper presented at Vocational Education Association National Conference"	.NT.		/NO

What Subjects Does ERIC Cover?

Materials in the ERIC database, which address every conceivable issue in the field of education, are covered by one of sixteen clearinghouses, each of which represents a broad educational subject area. The names and identifying codes of the clearinghouses follow (see number 7 under **ERIC's Searchable Fields and Vendors' Field Access Labels**). For clearinghouse addresses and phone numbers, contact:

ERIC Processing and Reference Facility
4833 Rugby Avenue, Suite 301
Bethesda, MD 20814
Telephone: (301) 656-9723

- Adult, Career, and Vocational Education (CE)
- Counseling and Personnel Services (CG)
- Educational Management (EA)
- Elementary and Early Childhood Education (PS)
- Handicapped and Gifted Education (EC)
- Higher Education (HE)
- Information Resources (IR)
- Junior Colleges (JC)
- Languages and Linguistics (FL)
- Reading and Communication Skills (CS)
- Rural Education and Small Schools (RC)
- Science, Mathematics, and Environmental Education (SE)
- Social Studies/Social Science Education (SO)
- Teacher Education (SP)
- Tests, Measurement, and Evaluation (TM)
- Urban Education (UD)

Glossary

BRS—Bibliographic Retrieval Services
CIJE—**Current Index to Journals in Education**
ED#—ERIC Document Number
EDRS—ERIC Document Reproduction Service
EJ#—ERIC Journal Number
ERIC—Educational Resources Information Center
RIE—**Resources in Education**

What Materials Does ERIC Contain?

ERIC contains materials that range from worksheets to doctoral dissertations to computer programs. These materials are classified by publication types. (See number 19 under **ERIC's Searchable Fields and Vendors' Field Access Labels**.) The ERIC publication types, along with their corresponding publication codes, follow:

Code	Publication Type
010	BOOKS
	COLLECTED WORKS
020	• General
021	• Conference Proceedings
022	• Serials
030	CREATIVE WORKS (Literature, Drama, Fine Arts)
	DISSERTATIONS/THESES
040	• Undetermined
041	• Doctoral Dissertations
042	• Master's Theses
043	• Practicum Papers
	GUIDES
050	• General
	• Classroom Use
051	• Instructional Materials (for learner)
052	• Teaching Guides (for teacher)
055	• Nonclassroom Use (for administrative & support staff, and for teachers, parents, clergy, researchers, counselors, and others in nonclassroom situations)
060	HISTORICAL MATERIALS
070	INFORMATION ANALYSES (Literature Reviews, State-of-the-Art Papers)
071	• ERIC Information Analysis Products (IAPs)

Code	Publication Type
080	JOURNAL ARTICLES
090	LEGAL/LEGISLATIVE/REGULATORY MATERIALS
100	AUDIOVISUAL/NONPRINT MATERIALS
101	• Computer Programs
110	STATISTICAL DATA (Numerical, Quantitative)
120	VIEWPOINTS (Opinion Papers, Position Papers, Essays, etc.)
	REFERENCE MATERIALS
130	• General
131	• Bibliographies
132	• Directories/Catalogs
133	• Geographic Materials
134	• Vocabularies/Classifications/ Dictionaries/Glossaries
	REPORTS
140	• General
141	• Descriptive
142	• Evaluative/Feasibility
143	• Research/Technical
150	SPEECHES, CONFERENCE PAPERS
160	TESTS, EVALUATION INSTRUMENTS
170	TRANSLATIONS
171	• Multilingual/Bilingual Materials
999	OTHER/MISCELLANEOUS (Not Classifiable Elsewhere)

This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education under contract number NIE-400-83-0023. The opinions expressed in this guide do not necessarily reflect the positions or policies of OERI or the Department of Education.

To Order:

ERIC JOURNAL ARTICLES (when available)
University Microfilms International, Article Clearinghouse
300 North Zeeb Road
Ann Arbor, MI 48106
Telephone: (800) 732-0616

ERIC DOCUMENTS (microfiche or paper copy)
ERIC Document Reproduction Service (EDRS)
3900 Wheeler Avenue
Alexandria, VA 22304-5110
Telephone: (800) 227-3742

THESAURUS OF ERIC DESCRIPTORS
ORYX Press
2214 North Central at Encanto
Phoenix, AZ 85004
Telephone: (800) 457-6799

ERIC SEARCH TOOLS (Title Index, Source Directory, Identifier Authority List, Magnetic Tapes, etc.)
ERIC Processing and Reference Facility
4833 Rugby Avenue, Suite 301
Bethesda, MD 20814
Telephone: (301) 656-9723

Online Vendor Addresses:

BRS Information Technologies
1200 Route 7
Latham, NY 12110
Telephone: (800) 345-4277

DIALOG Information Services
3460 Hillview Avenue
Palo Alto, CA 94304
Telephone: (800) 334-2564

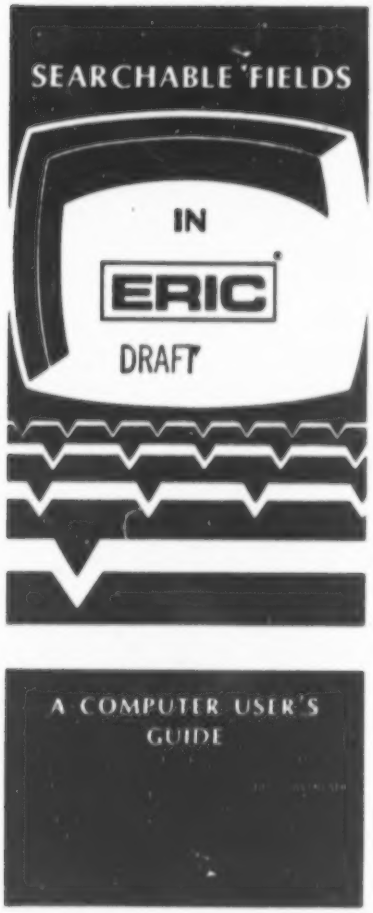
ORBIT Search Service
System Development Corporation
2525 Colorado Avenue
Santa Monica, CA 90406
Telephone: (800) 421-7229

Developed by:
ERIC Clearinghouse on Rural Education and Small Schools
Box 3AP
New Mexico State University
Las Cruces, NM 88003
Telephone: (505) 646-2623
Contact: Amelita Hill

March, 1986

APPENDIX B: REFERENCE GUIDE TO

THE SEARCHABLE FIELDS IN ERIC: DRAFT



Clues to ERIC

This reference guide introduces and explains major searchable fields of the ERIC database and presents field access labels of three online ERIC vendors: BRS, DIALOG, and SDC.

ERIC is the Educational Resources Information Center, formed in 1966 to offer users access to the world of educational research. The ERIC database contains abstracts and annotations of over 576,162 educational materials, making it one of today's most comprehensive bibliographic databases.

Two subfiles provide online access to the ERIC database: **RESOURCES IN EDUCATION (RIE)** and **CURRENT INDEX TO JOURNALS IN EDUCATION (CIJE)**. RIE contains resumes that provide bibliographic information and abstracts for a variety of educational materials. CIJE contains resumes of articles pertaining to education from more than 760 journals. CIJE resumes provide bibliographic information and annotations. RIE and CIJE indexes are also available in printed form at over 2,000 libraries and educational service centers throughout the United States and abroad.

This guide presents the various retrieval capabilities—or searchable fields—of ERIC along with the field access labels of three commercial vendors that maintain the ERIC database. Some fields are not searchable by certain vendors; in such cases, the space for the field label is left blank.

The vendors offer different options for searching ERIC—contact the vendor of your choice for information about services and search strategies. Vendor addresses appear later in this guide.

ERIC's Searchable Fields and Vendors' Field Access Labels

ERIC SEARCHABLE FIELD	BRS	SDC FIELD LABEL	DIALOG
1. Descriptor—describes subject fields with terms in ERIC Thesaurus			
a. Multiword Descriptor	(hyphen)	no label necessary	/DE
b. Descriptor Word—word within descriptor		/W	/DE
c. Single-Word Descriptor	DE.	/T	/DF
d. Major Subject Descriptor	MJ.	*	/DF*
e. Minor Subject Descriptor	MN.		
2. Identifier—describes subject fields with terms not in ERIC Thesaurus, such as proper nouns			
a. Multiword Identifier	ID.	no label necessary	/ID
b. Identifier Word—word within identifier		/W	/ID
c. Single-Word Identifier	ID.	/T	/IF
d. Major Subject Identifier		*	/IF*
3. Title	TI.	/TI	/TI
4. Abstract/Annotation—free text searching; does not yield precision of controlled vocabulary searching, increases online search time, but useful when searching for terms just beginning to appear in documents	AB.	/AB	/AB
5. Personal Author	AU.	/AU	AU =
6. ERIC Accession Number—document number as found in RIE or CIJE	AN.	/AN	/ED /EJ
7. Clearinghouse Accession Number—number assigned to document by publishing clearinghouse	CH.	/CHAN	AN =
• Clearinghouse Code—(two-letter prefix assigned to each clearinghouse	CH.	/CC	CH =
8. Publication Date—limit search to documents published within a specified period	>	from - to	PY = :PY =
9. Update		/UP	UD =
10. Geographic Source of Document (field added 1979)—where document was published	GS.	/LO	CP =
11. Institution—corporate author	IN.	/CS	CS =
12. Sponsoring Agency—funding agency	SN.	/SPO	SP =
13. Journal Citation	SO.	/SO	JN =
14. File Segment—RIE or CIJE (derived from ERIC Accession Number Field)	ED.AN EJ.AN	RIE/FS CIJE/FS	/ED /EJ
15. Availability—alternate availability included	AV.	/AV	/AVAIL
16. Governmental Status of Document (field added 1979—federal, state local	GV.	/LO	GL =
17. Report Number	NO.	/NU	RN =
18. Grant, Contract Number	NO.	/NU	CN =
19. Publication Type—form of publication (guide, computer program, thesis, etc.)	PT.	/DT	DT =
20. Language of Document (field added 1979)—language of text	LG.	/LA	LA =
21. Target Audience field added 1984)—intended users—if stated in document	ID.	/TG	
22. Descriptive Note—extends description of publication, i.e., "Paper presented at Vocational Education Association National Conference"	NT.	/NO	

Glossary

BRS—Bibliographic Retrieval Service
CIJE—Current Index to Journals in Education
ED#—ERIC Document Number Prefix
EDRS—ERIC Document Reproduction Service
EJ#—ERIC Journal Number Prefix
ERIC—Educational Resources Information Center
RIE—Resources in Education
SDC—System Development Corporation

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What Subjects Does ERIC Cover?

The materials in the ERIC database, which cover every conceivable issue in the field of education, are organized into the 16 broad topic areas that follow:

- Adult, Career, and Vocational Education
- Counseling and Personnel Services
- Elementary and Early Childhood Education
- Educational Management
- Handicapped and Gifted Education
- Higher Education
- Information Resources
- Junior Colleges
- Language and Linguistics
- Reading and Communication Skills
- Rural Education; Small Schools; American Indian, Mexican American, Migrant, and Outdoor Education
- Science, Mathematics, and Environmental Education
- Social Studies/Social Science Education
- Teacher Education
- Tests, Measurement, and Evaluation
- Urban Education

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What Materials Does ERIC Contain?

ERIC contains materials that range from worksheets to doctoral dissertations to computer programs. These materials are classified by publication types. (See number 19 under **ERIC's Searchable Fields and Field Access Labels**.) The ERIC publication types, along with their corresponding publication codes, follow:

Code	Publication Type
010	BOOKS
	COLLECTED WORKS
020	• General
021	• Conference Proceedings
022	• Serials
030	CREATIVE WORKS (Literature, Drama, Fine Arts)
	DISSERTATIONS/THESES
040	• Undetermined
041	• Doctoral Dissertations
042	• Master's Theses
043	• Practicum Papers
	GUIDES
050	• General
051	• Classroom Use
052	• Instructional Materials (for learner)
053	• Teaching Guides (for teacher)
055	• Nonclassroom Use (for administrative & support staff, and for teachers, parents, clergy, researchers, counselors, and others in nonclassroom situations)
060	HISTORICAL MATERIALS
070	INFORMATION ANALYSES (Literature Reviews, State-of-the-Art Papers)
071	• ERIC Information Analysis Products (IAPs)
080	JOURNAL ARTICLES
090	LEGAL/LEGISLATIVE/REGULATORY MATERIALS
100	AUDIOVISUAL/NONPRINT MATERIALS
101	• Computer Programs
110	STATISTICAL DATA (Numerical, Quantitative, and Other)
120	VIEWPOINTS (Opinion Papers, Position Papers, Essays, etc.)
	REFERENCE MATERIALS
130	• General
131	• Bibliographies
132	• Directories/Catalogs
133	• Geographic Materials
134	• Vocabularies/Classifications/ Dictionaries
	REPORTS
140	• General
141	• Descriptive
142	• Evaluative/Feasibility
143	• Research/Technical
150	SPEECHES, CONFERENCE PAPERS
160	TESTS, EVALUATION INSTRUMENTS
170	TRANSLATIONS
171	• Multilingual/Bilingual Materials
999	OTHER/MISCELLANEOUS (Not Classifiable Elsewhere)

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Ann Arbor, MI 48106
Telephone: (800) 521-0600

ERIC DOCUMENTS
ERIC Document Reproduction Service (EDRS)
3900 Wheeler
Alexandria, VA 22304-5110
Telephone: (800) 227-3742

THESAURUS OF ERIC DESCRIPTORS
ORYX Press
2214 North Central at Encanto
Phoenix, AZ 85004
Telephone: (602) 254-6156

ERIC SEARCH TOOLS (Title Index, Source Directory, Identifier Authority, etc.)
ERIC Processing and Reference Facility
4833 Rugby Avenue, Suite 301
Bethesda, MD 20014
Telephone: (301) 656-9723

Online Vendor Addresses:

BRS Search Service
1200 Route 7
Latham, NY 12110
Telephone: (800) 833-4707

DIALOG
Lockheed Information Systems
3460 Hillview Avenue
Palo Alto, CA 94304
Telephone: (800) 334-2564

SDC Search Service
2525 Colorado Avenue
Santa Monica, CA 90406
Telephone: (800) 421-7229

Developed by:
ERIC Clearinghouse on Rural Education and Small Schools
Box 3AP
New Mexico State University
Las Cruces, NM 88003
Telephone: (505) 646-2623
Contact: Amelita Hill

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APPENDIX C: SEARCH EXERCISE AND QUESTIONNAIRE FOR STUDENT REVIEWERS

We'd like your input as we design a reference guide to the searchable fields of the ERIC database. Please read the draft of the guide and then fill out this evaluation. The first part of the evaluation is an exercise in which you select ERIC searchable fields and online vendor field labels to complete a particular search task.

In the second part of the evaluation, we ask what you think of the document. We would like your advice for ways in which we can make the guide more useful to you in particular and for ERIC searchers in general.

I. Searching with the Guide

Imagine you are searching the ERIC database. The following steps present several search tasks. Select the searchable field with which you can most efficiently complete the given task. Then indicate the specified vendor's label for that field.

1. You are searching on BRS for documents about Kansas City. The field label you use is _____. Hint: The ERIC thesaurus does not include the term "Kansas City."

2. You want to limit the search to documents listed in RIE. You use the following BRS field label: _____

3. You decide to limit your search to those RIE documents published in Missouri. The BRS field label you use is _____.

4. Now you're searching on DIALOG for documents about conversational language courses. After finding the appropriate two-word term in the ERIC thesaurus, you specify your search request with the following field label:

_____

5. You're particularly interested in documents about conversational Spanish courses. However, it isn't necessary that the documents be written in Spanish. The DIALOG field label you use is _____.

6. You want to limit the search to teaching guides. You use code _____ along with the following DIALOG field label: _____

7. With the following DIALOG field label, you limit the search to guides that you can order from EDRS: _____

8. Now you're searching on SDC. You're looking for documents about values-added instructional models. You check the ERIC thesaurus for the term "values added" but it doesn't appear. So you search the Identifier field for "values added," designating a major subject identifier as follows: _____

9. The term "values added" doesn't show up in the Identifier field--either as a major subject identifier or a nonmajor subject identifier. Perhaps the term is recent enough that it does not appear in any of the controlled vocabulary fields. You try searching for the term in the field indicated by the following SDC label: _____

10. This search uncovers 15 citations that include the term "values added." With the following SDC field label, you check to see if any of the documents are authored by the Office of Educational Research and Improvement:

_____

II. What Do You Think?

So much for the searching. Now we'd like to ask you how you feel about the guide.

1. Was the guide easy to read?

Why or why not?

2. What do you like or dislike about the guide's "looks"?

3. What information from the guide did you use in the search exercise?

Was the information easy to find?

Why or why not?

Did you make any notes on the guide?

Can you share them with us?

4. How familiar are you with the ERIC database?

How did you become acquainted with ERIC?

Have you searched ERIC before? (If you have searched ERIC or you are very familiar with the database, please answer the rest of the questions in this section. Otherwise, please proceed to section 5.)

Have you felt a need for an ERIC search reference?

For what reference information did you feel a need?

What information (if any) from this guide will be most useful to you while performing an ERIC search?

What other reference information would you like to see in this guide?

Is there any information that you would remove from the guide? What?

Do you think the guide will influence your search strategy? How?

Do you think you will refer to this guide regularly while searching or when you come across problems?

5. Do you have any further suggestions or comments about the guide?

Thank you so much for your help!

APPENDIX D: QUESTIONNAIRE FOR REVIEWERS WITH MODERATE SEARCHING EXPERIENCE

EVALUATION

We'd like to ask you some questions about the draft of the reference guide. We consider you to be the authority on the needs of the ERIC searcher, so with your input the guide can fulfill its purpose and serve as a reference tool. Please feel free to elaborate on additional sheets of paper.

1. Was the guide easy to read?

   Why or why not?

2. What do you like or dislike about the guide's "looks"?

3. Have you felt a need for an ERIC search reference?

   For what reference information did you feel a need?

What information (if any) from this guide will be most useful to you when you are performing a search?

What other reference information would you like to see in this guide?

Is there any information that you would remove from the guide? What?

4. Have you performed an ERIC search since you received the draft? (If not, please proceed to section 5.)

Did you refer to the draft during the search?

What information did you use?

Was the information easy to find?

Why or why not?

Did you make any notes on the draft?

Can you share them with us?

Did the draft influence your search strategy?

How?

Were the results favorable?

Why or why not?

5. When you receive the final version of the guide, where do you think you'll keep it?

Do you think you'll use it while searching?

Do you think you'll refer to it regularly while searching, or when you come across problems?

Do you have any further suggestions or comments that will help us produce the guide that you're looking for?

Thank you so much for your help!

APPENDIX E: TELEPHONE SURVEY

EVALUATION

We'd like to ask you some questions about the draft of the reference guide:

1. Was the guide easy to read?

   Why or why not?

2. What do you like or dislike about the guide's "looks"?

3. Have you sensed a need for an ERIC search reference?

   For what reference information did you feel a need?

   What information in the guide do you think will be most useful to the ERIC searcher?

What other reference information would you like to see in the guide?

Is there any information that you would remove from the guide? What?

4. Have you performed an ERIC search since you received the draft? (If not, please proceed to section 5.)

Did you refer to the draft during the search?

What information did you use?

Was the information easy to find?

Why or why not?

Did you make any notes on the draft?

Can you share them with us?

5. When you receive the final version of the guide, where do you think you'll keep it?

Do you think you'll use it while searching?

Do you think you'll refer to it regularly while searching, or when you come across problems?

Do you have any further suggestions or comments that will help us produce the guide that you're looking for?

Thank you so much for your help!

APPENDIX F: REVIEWERS' SUGGESTED REVISIONS

Field Labels

DIALOG

* 1. #1.d /DF* to /MAJ

* 2. #2.d /IF* to /MAJ

* 3. #6 /ED, /EJ TO ED, EJ--(Direct record access; e.g., ED187254)

  4. Pub. Date--can be /1985-1986

* 5. Target Audience--TA=

* 6. /AVAIL to AV=

* 7. #1.a--"No label necessary"

* 8. #1.e--/MIN

* 9. #2.a--"No label necessary"

* 10. #2.e--/MIN

* 11. #8--ONLY PY=

BRS

* 1. Descriptor Word-- .DE.
  .UJ.
  .UN.

* 2. Single Word Descriptor-- .DE. to .MJ,MN. (ERIC Facility says leave blank) ?

* 3. Major Subject Descriptor-- .MJ.
  .UJ.

* 4. Minor Subject Descriptor-- .MN.
  .UN.

* 5. Pub. Date-- YR > or .YR. (Facility says .YR.)
  YR < .YR.(84-85).YR

* 6. Update-- UP=

* 7. #2.a, 2.b--Include example--(e.g., "X adj Y.id.") (Facility) ?

* 8. #2.c--.ID. to blank (Facility) ?

* 9. #15.a--leave blank; #15.b--.AV.

ORBIT

* 1. Pub. Date-- ..limit yr gt '83;
* /SO (Facility)*

Addresses, Phone Numbers

DIALOG

* 1. "DIALOG" to "DIALOG INFORMATION SERVICES"

* 2. Remove "Lockheed Information Systems"

3. Translate phone number to (800) 3DIALOG

4. Phone for CA--(800) 982-5838

BRS

* 1. Phone number-- (800) 345-4277

* 2. "Search Service" to "Information Technologies" (Facility)

SDC

* 1. Change SDC references to ORBIT (cover, opening paragraph, headers under "Field Labels," glossary, and address)

* 2. Change address to:

ORBIT Search Service
System Development Corporation...

3. Add telephone numbers:

CA--(800) 352-6689

Alternate Number--(213) 453-6194

EDRS

1. Add phone # for VA--(703) 823-0500--check this number and see if 800 number available for VA
2. List 800 number as (800) 227-ERIC
3. Wheeler **Avenue**

UMI

* 1. University Microfilms International, **Article Clearinghouse**

* 2. Phone--(800)732-0616

ORYX

* 1. Phone--(800)457-6799

Ordering

* 1. Put all materials to be ordered in bold
2. Mention microfiche available from EDRS
* 3. Qualify "ERIC JOURNAL ARTICLES" with (listed as available)
* 4. RIE, CIJE from ORYX

Text

Introduction

* 1. "576,162" to "half a million"
* 2. "CIJE contains bibliographic resumes that annotate articles on education from more than 760 journals."
* 3. After "the world of educational research" add "Today the ERIC database is one of the nation's largest bibliographic databases, indexing over half a million research and applied materials in thefield of education."

4. Disliked "Clues to ERIC"--implies something obscure

5. Define "materials"

* 6. "Some fields or situations within fields..."

* 7. Clarify difference between CIJE and RIE; refer to document type list

* 8. "Field access labels"--jargon

* 9. Define "resumes"

Pub. Type List

* 1. "(See number 19 under **ERIC's Searchable Fields and Vendors' Field Access Labels.**)"

2. Pub. type--example of a limit (maybe in text before list in "What Materials..."). List field labels in text before pub. type listing

ERIC's Searchable Fields...

* 1. Headings--Searchable Field Field Label

ERIC	BRS	DIALOG (Version 2)	ORBIT

* 2. Change #19, Pub. Type description to: form of publication (use with codes listed under **What Materials Does ERIC Contain?**)

* 3. Remove parentheses and extra "to" from "Clearinghouse Code"

* 4. Add period after #14, EJ.AN.

* 5. Add opening paren. for #21.

* 6. #19, Pub. type--(field added 1979) ?

7. Descriptor--reference to "keywords," "indexing terms"

* 8. Tighten up description-- "free text searching" may imply that this occurs only with Abstract field

* 9. #22, Descriptive Note-- i.e. to e.g.

* 10. #15, Availability

    a. ERIC Availability (from EDRS)

    b. Alternate Availability

* 11. #21, Target Audience--stronger wording about its limited use

  12. Define what a "searchable field" is

  13. Searchable field descriptions and field labels crowded

* 14. Change order of #1.a., 1.b, 1.c, to 1.a, 1.c, 1.b. Same with #2.

* 15. Add closing paren. for #16.

* 16. #1 "...with terms **from** ERIC thesaurus"

* 17. #2 "...not found in ERIC thesaurus"

* 18. Add 2.e--Minor Subject Identifier

* 19. #7 Change "publishing" to "an ERIC"

* 20. #7° "two-letter prefix to Clearinghouse Accession Number; represents an ERIC clearinghouse"

* 21. #8 "Publication Date" to "Publication Year"

* 22. #14 "ERIC Accession Number field"

* 23. #1.b, 2.b--"Word-word" to "Word(s)-word(s)"

  24. More description of searchable fields

  25. Descriptor--"Term in ERIC Thesaurus that describes subject." or "Indexing term from ERIC Thesaurus."

  26. Identifier--"Includes additional identifying subject terms not found in ERIC Thesaurus."

  27. Journal Citation--Journal Name

Glossary

* 1. Remove "SDC" and definition

* 2. Remove "EDRS" and definition

* 3. ED--ERIC Document Number Prefix (RIE materials)

* 4. EJ--ERIC Journal Number Prefix (CIJEmaterials)

* 5. Bibliographic Retrieval Services (Facility)

Cover

* 1. Change SDC to ORBIT

* 2. Add vendor names to title

* 3. "Computer users"--some search with dumb terminals

Artwork, Layout

Cover

1. Use red in cover

* 2. Remove white border

* 3. Add space between vendor names

4. Soften up black with red or gray--grade keyboard rows with light gray, medium gray, charcoal, and black--too stark; strains the eyes

5. Print ERIC in red

* 6. Move vendor names down (Debbie)

7. Blue in cover

8. Drop vendor names or increase prominence and center in box

Inside

* 1. Overlapping panel w/ addresses may confuse reader as to order of presentation

* 2. Difficult to read horizontally--maybe draw horizontal lines--shade alternate lines gray

* 3. Move down "CLUES TO ERIC"; increase point size(?) (Debbie)

4. Justify text (Debbie)

* 5. Increase point size "ERIC's Searchable Fields..." and column heads (Debbie)

* 6. Extend line under "SEARCHABLE FIELD"

7. Debbie notes change of typeface for each heading

* 8. Increase point size "What Subjects..." (Debbie)

* 9. Move terminal down on "What Subjects..." panel

* 10. Too much space under "What Subjects" (Debbie)

* 11. Add space (or headings) between paragraphs in intro.

* 12. Pub. type list all on one panel--then move to panel on which "What Subjects..." now appears

* 13. Spell out "no." in disclaimer; justify (Debbie)

14. Reduce terminal next to "What Materials.."? (Debbie)

15. Move "What Materials" heading down and over to fill up space (Debbie)

16. Increase point size of "To Order" (Debbie)

* 17. Glossy paper makes it difficult to write notes in pencil

* 18. Lighter italic type for explanatory notes in table

Additional Information

Subjects Covered

* 1. Names, phones of clearinghouses (in place of "What Subjects Does..." Opening text--"The materials in the ERIC database are organized into 16 topic areas, each of which is covered by an ERIC clearinghouse. The specialties, identifying codes, and phone numbers of the ERIC clearinghouses follow:

-or-

* 2. In "What Subjects..." add "Child Development, Child Care" to "Elementary and Early Childhood Education."

Search Examples

1. Placement of hyphen (BRS)
2. ADJ between words when searching free text (BRS)
3. How to limit
4. Placement of asterisks (ORBIT) (explanation in footnote)
5. Placement of all field labels

Intro

* 1. Emphasize use of ERIC thesauras while searching
* 2. Field labels for full-blown search system--may not be applicable for Knowledge Index/After Dark Searchers ?
3. "RIE materials are identified by ED accession numbers"
4. "CIJE materials are identified by EJ accession numbers"

* 5. Compare/contrast online and manual searching--benefits of each

* 6. Mention ERIC microfiche collection available at many libraries

Ordering Information

* 1. New **Directory of Search Services**-- Available ?

* 2. Online ordering info.

Addresses

* 1. Refer user to ERIC Facility for clearinghouse addresses

Target Audience

* 1. List

Vendor Printing Formats

* 1. List where "What Subjects" is, move "What Subjects" to back panel

Basic Instructions to Get Started Using ERIC

* 1. Searchable field and field label listings assume good knowledge of ERIC, but introductory text does not assume this familiarity

Price information

1. Documents

   a. Microfiche

   b. Paper copy

2. Online searches

Free text searching capabilities offered by vendors

Information on truncation

Date

* 1. Put date on guide so as to distinguish from future releases

SASE ?

Accession ranges by year

Mandatory age and academic level descriptors ?

Searchable fields

1. Format for searching by author
2. Format for limiting by update
3. Format for searching by language

Info. to Remove

Subjects covered

To Order

END

U.S. DEPT. OF EDUCATION

OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT (OERI)

ERIC®

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SEP_22_1987